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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,722	08/28/2001	Hironobu Kitajima	1619.1014	4071

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EXAMINER

OUELLETTE, JONATHAN P

ART UNIT	PAPER NUMBER
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3629

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,722

Applicant(s)

KITAJIMA, HIRONOBU

Examiner

Jonathan Ouellette

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20010828.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claim 9 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

3. As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an

invention is eligible for a patent is to determine if the invention is within the "technological arts".

4. Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).
5. This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

6. In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.
7. The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under

the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

8. Claim 9 appear to be describing a method that is attempting to sell a travel coordination service; wherein upon request be a customer, the travel agent (service broker) researches available travel locations and travel methods (brochures and flight schedules) and supplies the customer with a travel plan. Thus, this process does not include a distinguishable apparatus, computer implementation, or any other incorporated technology, and would appear to be an attempt to patent an abstract idea not a “tangible” process and, therefore, non-statutory subject matter.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by DeLorme et al. (US 5,948,040).**

11. As per independent Claims 1 and 9, DeLorme discloses a service brokering apparatus [method] (C31 L42-51, brokering) for providing a complex service (travel plan) integrating a plurality of elementary services (service providers) realized on computers

comprising: means for storing service description information for each elementary service (Fig. 1C, who, what, where listings), the service description information comprising a combination of identification information of elementary service entities (Fig. 1C), declarative description information on information needed to realize the elementary services (Fig. 1C), and declarative description information on processing results of the elementary services (Fig. 1C); means for transmitting and receiving messages (Fig. 2, Input/Output); and means for decomposing the complex service into elementary services (C8 L33-48, TRIPS calculates, delineates, and displays travel route) using the service description information upon receipt of a request message for the complex service from the outside (C7 L22-24, Travel Route, who/what/where entered by retail user), and getting an elementary service request plan comprising strings of combinations of at least elementary service request information needed to realize the complex service, and identification information of elementary service entities (C7 L28-65, C8 L33-48, TRIPS generates full itinerary).

12. As per Claim 2, DeLorme discloses means for generating the elementary service request plan, then actually requesting an elementary service to an elementary service entity, and compiling the processing results so that the processing results of the complex service are prepared and notified to the requesting outside entity (C7 L28-65, C8 L33-48, TRIPS creates full itinerary; C31 L42-51, brokering).
13. As per Claim 3, DeLorme discloses means for generating the elementary service request plan, then transmitting the request plan in response to a request for it from the outside (C7 L28-65, C8 L33-48, TRIPS creates full itinerary; C31 L42-51, brokering).

14. As per Claim 4, DeLorme discloses means for receiving from the outside service description information comprising a combination of identification information of the elementary service entities, declarative description information on information needed to realize the elementary service thereof, an declarative information on the processing results of the elementary service, and storing the service description information into means for dynamically registering the service description information (C7 L22-35, C8 L33-37, receiving user defined travel route).
15. As per Claim 5, DeLorme discloses wherein the declarative description information on information needed to realize the elementary service and the declarative description information on the processing results of the elementary service are expressed by classes or objects of an object-oriented language (Fig.1C; C8 L33-62, TRIPS generated travel itinerary, C8 L33-62).
16. As per Claim 6, DeLorme discloses ontology storing means for storing definition information on vocabularies used in the declarative description information on information needed to realize the elementary service and the declaration description information on the processing results of the elementary service (Fig. 1C, C23 L30-37, retail user queries Topical subsystem/databases for travel related topics, subject matter, and contents – vocabularies would be entered by user to request descriptive info).
17. As per Claim 7, DeLorme discloses wherein the means for generating the elementary service request plan prepares the elementary service request plan taking into account meta-information describing the nature of the elementary service entity itself, in addition to the declarative description information on information needed to realize the elementary

service and the declarative description information on the processing results of the elementary information (C8 L33-48, itinerary determines by quickest route, shortest route, seat availability, pricing, and departure times).

18. As per Claim 8, DeLorme discloses wherein the meta-information user for preparing the elementary service request plan is information on users' access rights to elementary services, information on the line speed or processing speed of elementary services, or information on the user preference of the elementary services (C8 L33-48).
19. As per independent Claims 10 and 11, DeLorme discloses a service brokering program [computer readable storage medium] for providing a complex service integrating a plurality of elementary services realized on a computer (C31 L42-51, brokering), the program causing the computer to execute the functions of: receiving a request message for the complex service from the outside (Fig. 1C, retail user answers "who/ what/ where?"; C7 L22-35, C8 L33-37, receiving user defined travel route); and upon receipt of the request message, decomposing the complex service into the elementary services (C8 L33-48, TRIPS calculates, delineates, and displays travel route) using service description information comprising a combination of identification information of elementary service entities, declarative description information on information needed to realize the elementary services, and declarative description information on the processing results of the elementary services that are stored in advance for each elementary service (C7 L22-24, Travel Route, who/what/where entered by retail user), and generating an elementary service request plan comprising strings of combinations of at least elementary service request information needed to realize the complex service, and identification information

of the elementary service entities (C7 L28-65, C8 L33-48, TRIPS generates full itinerary).

20. As per independent Claim 12, DeLorme discloses a service integration system comprising: a user agent (Fig.2, retail user); a brokering agent (Fig.2, TRIPS system; C31 L42-51, brokering); and, elementary service agents (Fig.2, Provider(s)), connected to each other via a network (Fig.2), for providing a complex service integrating a plurality of elementary services realized on computers, the brokering agent comprising means for storing service description information comprising a combination of identification information of elementary service entities (Fig. 1C, who, what, where listings), declarative description information needed to realize the elementary services (Fig. 1C), and declarative description information on the processing results of the elementary services (Fig. 1C), means for transmitting and receiving messages (Fig.2, Input/Output), and means for upon receipt of a request message for the complex service from the user agent (C7 L22-24, Travel Route, who/what/where entered by retail user), decomposing the complex service into the elementary services using the service description information (C8 L33-48, TRIPS calculates, delineates, and displays travel route), and generating an elementary service request plan comprising strings of combinations of at least elementary service request information needed to realize the complex service, and the identification information of the elementary service entities, and means for requesting elementary services to the elementary service agents based on the generated request plan (C31 L42-51, brokering), and compiling the processing results so that the processing

results of the complex service are prepared and notified to the requesting user agent (C7 L28-65, C8 L33-48, TRIPS generates full itinerary).

21. As per independent Claim 13, DeLorme discloses a service integration system comprising: a user agent (Fig.2, retail user); a brokering agent (Fig.2, TRIPS system; C3 L42-51, brokering); and, elementary service agents (Fig.2, Provider(s)), connected to each other via a network (Fig.2), for providing a complex service integrating a plurality of elementary services realized on computers, the brokering agent comprising means for storing service description information comprising a combination of identification information of elementary service entities (Fig.1C, who, what, where listings), declarative description information needed to realize the elementary services (Fig. 1C), and declarative description information on the processing results of the elementary services (Fig. 1C), means for transmitting and receiving messages (Fig.2, Input/Output), and means for upon receipt of a request message for the complex service from the user agent (C7 L22-24, Travel Route, who/what/where entered by retail user), decomposing the complex service into the elementary services using the service description information (C8 L33-48, TRIPS calculates, delineates, and displays travel route), and generating an elementary service request plan comprising strings of combinations of at least elementary service request information needed to realize the complex service, and the identification information of the elementary service entities, and means for notifying the generated request plan to the requesting user agent (C7 L28-65, C8 L33-48, TRIPS generates full itinerary), the user agent comprising means for requesting elementary

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services to the elementary service agents based on the request plan generated by the brokering agent (C14 L27-35, C18 L25-30).

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

23. The following non-patent literature is cited to show the best non-patent literature prior art found by the examiner:

McDougall, Diane, "Travel by Site." CMA Management, September 2000.

McDougall discloses several online travel service available over the Internet for booking hotel and flight reservations.

24. Additional Literature has been referenced on the attached PTO-892 form, and the Examiner suggests the applicant review these documents before submitting any amendments.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Ouellette whose telephone number is (571) 272-6807. The examiner can normally be reached on Monday through Thursday, 8am - 5:00pm.

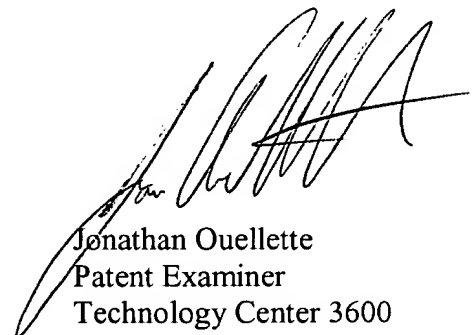
26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on (571) 272-6812. The fax phone numbers for

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the organization where this application or proceeding is assigned (571) 273-8300 for all official communications.

27. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Office of Initial Patent Examination whose telephone number is (703) 308-1202.

August 5, 2005



Jonathan Ouellette
Patent Examiner
Technology Center 3600